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Applicant : George H. Beall and David L. Weidman
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MODIFIED 1449 FORMU.S. PATENT DOCUMENTS

<u>Examiner Initial</u>		<u>Document Number</u>	<u>Issue Date</u>	<u>Name</u>
<u>Allah</u>	1.	3,617,317	11/1971	Sack et al.
	2.	3,812,689	5/1974	Reade
	3.	4,083,727	4/1978	Andrus et al.
	4.	4,209,229	6/1980	Rittler
	5.	4,473,653	9/1984	Rudoi
	6.	4,725,110	2/1988	Glenn et al.
	7.	4,778,242	10/1988	Ota et al.
	8.	4,814,297	3/1989	Beall et al.
	9.	4,865,414	9/1989	Ohta et al.
	10.	5,042,898	8/1991	Morey et al.

<u>Alleh</u>	11.	5,123,070	6/1992	Bradley
	12.	5,186,729	2/1993	Brown et al.
	13.	5,322,559	6/1994	Sleight
	14.	5,336,643	8/1994	Goto et al.
	15.	5,367,589	11/1994	MacDonald et al.
	16.	5,426,714	6/1995	Gadkaree et al.
	17.	5,433,778	7/1995	Sleight
	18.	5,514,360	5/1996	Sleight et al.
	19.	5,591,682	1/1997	Goto
	20.	5,694,503	12/1997	Fleming et al.

FOREIGN PATENT DOCUMENTS

<u>Examiner Initial</u>		<u>Document Number</u>	<u>Date</u>	<u>Country</u>
<u>Alleh</u>	21.	WO 97/26572	7/1997	PCT
	22.	WO 97/28480	8/1997	PCT

OTHER ART

<u>Examiner Initial</u>		
<u>Alleh</u>	23.	Buerger, M.J., "The Stuffed Derivatives of the Silica Structures," Am. Mineral, Vol. 39, 1954, pp. 610-614.

Auth

24. Bush et al., "High-Temperature Mechanical Properties of Ceramic Materials: II, Beta-Eucryptite," Journal of the American Ceramic Society-Bush and Hummel, Vol. 42, No. 8, August 1959.
25. Chu et al., "Multilayer Dielectric Materials of SiO_x/Ta₂O₅/SiO₂ For Temperature Stable Diode Lasers," Materials Chemistry and Physics, Vol, 42, 1995, pp. 214-215. }
26. Gillery et al., "Thermal Contraction of β -Eucryptite (Li₂ Al₂ O₃ 2SiO₂) by X-ray and Dilatometer Methods," Journal of the American Ceramic Society, Vol. 42, No.4, April 1959, pp 175-177.
27. Kokubun et al., "Three Dimensional Athermal Waveguide for Narrow-Band Optical Filter," ECOC '93, Vol. 2, September 12-16, 1993, pp 429-432.
28. Lee et al., "In Situ-Whisker-Reinforced AlPO₄-Modified β -Eucryptite Glass-Ceramic: I, Morphology and Crystallization Kinetics," Journal of the American Ceramic Society, 79(3), 1996, pp 597-602.
29. Levin et al., Fig 449, Phase Diagrams for Ceramists, The American Ceramic Society, Columbus, Ohio, 1964, p. 166.
30. Martinek et al., "Linear Thermal Expansion of Three Tungstates," Journal of the American Ceramic Society-Discussions and Notes, April 1968, Vol. 51, No. 4, pp. 227-228.
31. Palmer, D.C., "Stuffed Derivatives of the Silica Polymorphs," Physical Behaviors, Geochemistry, and Material Applications, ed. by P. J. Heaney et al., Reviews in Mineralogy, 29, 83-122, Mineralogical Society of America, Washington D.C., 1994.

Full
Z
V

32. Roy et al., "The System Lithium Metasilicate-Spodumene-Silica," J. Am. Cer. Soc., 1949, Vol. 71, pp 2086-2095.
33. Yoffe et al., "Passive Temperature-Compensating Package for Optical Fiber Gratings," Applied Optics, October 20, 1995, Vol. 34, No. 30, pp 6859- 6861.
34. Yoffe et al., "Temperature Compensated Optical Fiber Bragg Gratings," Optical Fiber Communicatin, OFC'95 Technical Digest, Vol. 8, February 26, 1995-March 3, 1995, pp. 134-135.